

The Validity of PPP Revisited: An Application of Non-linear Unit Root Test

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Abstract

To this end, the validity of purchasing power parity (PPP) remains a controversial issue, as empirical evidence is inconclusive. This study provides robust empirical evidence to support the view that negligence of non-linearity may be the culprit of these contrasting findings. This paper demonstrates that the non-linear unit root test proposed by Kapetanios *et al.* [*Journal of Econometrics*, 2003, 112, pp.359-379] is able to reject unit root in 4 out of 5 cases, implying that deviations of exchange rates is mean reverting towards the PPP equilibrium values from the non-linear perspective, whereas the augmented Dickey-Fuller (ADF) test fails in 4 out of 5 cases. Thus, previous conclusions of the invalidity of PPP may be due to misleading results from the ADF test, which has low power against non-linearity.

Keywords: Purchasing power parity; Mean reversion; ASEAN economies; Real exchange rates; Non-linear unit root.

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I. INTRODUCTION

For the past few decades, the purchasing power parity (PPP) hypothesis has received extensive attention from exchange rate researchers. The PPP, which states that the exchange rate between currencies of two countries should be equal to the relative price of these countries, is one of the most frequently used hypotheses for the determination of exchange rate equilibrium. The issue of whether PPP holds or not has received extensive research in the past several decades. However, to date, previous empirical studies showed contrasting evidence on the validity of PPP. For instance, the empirical works of Lee (1976), Glens (1992), Lothian and Taylor (1996), Nagayasu (1998), Coakley and Fuertes (2001), Azali *et al.* (2001) and Razzaghipour *et al.* (2001) were supportive of long-run PPP hypothesis, whereas Corbae and Outliaris (1988), Edison and Fisher (1991), Engel *et al.* (1997), O'Connell (1998), Cuddington and Hong (2000) and Baum *et al.* (2001) provided empirical evidence against it. Meanwhile, the work of Salehizadeh and Taylor (1999) itself showed inconclusive results. Thus, Rogoff's (1996) verdict that the PPP puzzle is unresolved remains valid.